

SYSTEM AUDIT REPORT NUMBER 00/35812/S04



THIS REPORT RELATES TO SURVEILLANCE

VISIT ON 3/6-8/00

Company MARSHALL SPACE FLIGHT CENTER

Other Sites Visited

1. N/A

Address Bldg. 4203 Huntsville, AL 35812

2. N/A

Scope: ALL PROCESSES FOR PROCUREMENT, DESIGN, DEVELOPMENT, AND ONSITE PRODUCTION OF FLIGHT HARDWARE, FLIGHT SOFTWARE, AND ASSOCIATED GROUND SUPPORT EQUIPMENT INTERFACING WITH FLIGHT HARDWARE AND SOFTWARE, FOR WHICH MSFC HAS RESPONSIBILITY.

Standard(s) ISO-9001:94

Support Documentation(s) N/A

Non-English Languages Used N/A

Comments/Concerns of the Assessment Team:

No adverse trends detected. Recommend for continued Registration to ISO-9001:1994.

We will need to follow-up on the status of MSFC NCR 1-1, to review progress of site wide System Back-Up. Four (4) out of thirteen (13) organizations still to be followed up on.

- The visit is deemed to be Satisfactory
- Unsatisfactory visits may result in a change to the next audit activity.

Corrective Action Plan (CAP) Instructions:

- ☒ Return CAP in 20 working days (all NCs & QS-9000 Ois).
- ☐ Certificate processing initiates after receipt acceptance of CAPs.
- ☐ QS-9000 Ncss must be cleared prior to certificate issuance.
- ☐ Return CAP in ten days for major NCs issued during surveillance.

NQA ASSESSMENT TEAM

LEAD AUDITOR Judge P. Lunt

TEAM

TEAM

TEAM

TEAM

COMPANY INFORMATION

MGT REP Sid Saucier

QUALITY MANUAL (REV & ISSUE DATE)

MPD, R/D, (3/6/00)

The contents of this report is confidential and must not be disclosed to a third party without prior agreement of NQA, USA and the company named above.

Non-compliances non-conformances raised or observations noted within this report are the result of limited sampling and therefore non-compliances non-conformances may exist which have not been identified.

The company representative's signature indicates their agreement and understanding of any non-compliances non-conformances and observations contained in this report.

Prior to the assessment, the company must have completed a complete system internal audit and subsequent management review documented. The quality system shall be understood throughout the organization.

Signature
NQA, USA Representative

Date

Signature
Company Representative

Date 3/9/00

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for Sid Saucier

SYSTEM AUDIT REPORT NUMBER 00/35812/S04

SYSTEM REVISION STATUS AND AUDIT MATRIX

X indicates reference point for assessment. Note: X through entire box as applicable to indicate actual function/process audited against ISO 9000 requirement.		SPECIFIC ISO 9000 REQUIREMENTS FUNCTIONS/PROCESSES AUDITED DURING THIS VISIT										NEXT VISIT PLAN
		QUALITY	CNTR DIR	DEPT DIR	DESIGN	PURCH	INSP TEST	STORES	SHIPPING			
ISO 9000 REQUIREMENTS												
Mgt. Responsibility	4.1	✓	✓	✓							✓	
Quality System	4.2	✓									✓	
Contract Review	4.3											
Design Control	4.4	✓			✓						✓	
Document & Data Control	4.5											
Purchasing	4.6	✓				✓						
Control of Customer Supplied Product	4.7											
Product Identification & Traceability	4.8										✓	
Process Control	4.9										✓	
Inspection & Testing	4.10											
Control of Inspection, Measuring & Test Equip.	4.11											
Inspection & Test Status	4.12	✓					✓	✓	✓			
Control of Non-Conforming Product	4.13											
Corrective & Preventive Action	4.14							✓			✓	
Handling, Storage, Packaging, Preservation & Delivery	4.15	✓					✓	✓	✓			
Control of Quality Records	4.16											
Internal Quality Audits	4.17	✓									✓	
Training	4.18											
Servicing	4.19											
Statistical Techniques	4.20										✓	
Customer Complaints		✓									✓	
Use of NQA Logo		✓									✓	
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Aug.
2000

AUDIT RECORD

ISO 9000 Applicable
CLAUSES Standard

Non Compliances
Or Observations

Auditor(s) Judge P. Lunt

	ISO 9001	Reviewed the USE-OF-LOGO requirements with Sr. Quality Engineer. At the present time, they are not utilizing the LOGO in any way.	0	0
4.1	ISO 9001	Reviewed Management Responsibility element with Center Dir., Deputy Center Dir., Interim QMR, and Sr. Quality Engineer. Sampled procedure MPG-1280.1 R/A, and the following objective evidence: <ul style="list-style-type: none"> - NASA/MSFC Charter, MC-02-D - Management Review Meeting minutes: (2/23/00) - Internal Audit summary: (2/23/00) - ISO-9000 Implementation Team Meeting: (2/23/00) - Corrective Action summary: (2/23/00) - Extension to Scope Implementation Plan: (2/23/00) - Customer Feedback summary: (2/23/00) - Action Item Status: (2/23/00) - Reviewed 3 year Record retention requirements. 	0	1
4.2	ISO 9001	Reviewed Level I & II DQS Documents with Sr. Quality Engineer: <ul style="list-style-type: none"> - Level I: Marshall Policy Directive, R/C, 12/6/99 - Level II: MPG's, (various rev's) 	0	0
4.4	ISO 9001	Reviewed Design Control element with DCPCG Project Managers, System Eng., Program Manager for Biotechnology, and ISO Rep. Sampled procedure MPG-8060.1 R/B and the following objective evidence: A.) DCPCG Project follow-up from S03 Audit: <ul style="list-style-type: none"> - Project Plan, MSFC-PLAN-2785 (6/16/98) - Phase II Flight & Ground Safety Review, PCG-D-0058 R/O - CDR (3/3/99) - Preliminary Acoustic Test results per PCG-P-0052, 2/1/00 - ATP for Phase D (6/30/99) - VCB Letter, 2/7/00 - Payload Verification Plan PCG-D-0050, 11/1/99 - Assembly drawing PCG-E7-009 R/O 	0	0

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AUDIT RECORD

 ISO 9000
 CLAUSES Applicable
 Standard

 Non Compliances
 Or Observations

Auditor(s) Judge P. Lunt

4.6

ISO 9001

Reviewed Purchasing element with Procurement Analyst, and Contracts Specialists in buildings 4202, and 4203. Sampled procedures PS-OWI-05 R/D, MWI-5143.1 R/A, MWI-5000.1 R/A, and the following objective evidence:

- Hernandez Eng. Contract # NAS840364: a.) Pre-Negotiation Meeting (10/25/99), b.) JOFCO Report (2/14/00), c.) SOW (4/1/95), d.) Annual Award Fee Assessment, e.) Monthly Financial Report (3/3/00), f.) Monthly Performance Report (3/3/00), g.) DR-3 quarterly Progress Report (1/7/00), h.) DR-10 quarterly Problem Report (2/27/98).
- ASRI Contract #NAS899006: a.) SOW (3/3/00), b.) Original Contract (10/1/98), c.) Weekly Progress Reports (2/23/00), d.) Quarterly Cost Report (1/13/00)
- Aerojet Gen. Corp. Contract # NAS998004: a.) X38 DPS, b.) MOD 18 (2/18/00)
- Lockheed Martin Michoud Cooperative Agreement # NCC8-191: a.) Composite LOX Tank for X34, b.) Section D, 14 CFR, Part 1274, c.) NRA (2/17/99, 3/6/98), d.) Selection of Contractors (7/19/99), e.) Milestone Chart (9/30/99), f.) MOD-03 (3/3/00).
- Orbital Science contract # NAS840887: a.) X-34 project, b.) SOW, c.) MOD-21 (11/30/99), d.) Monthly Cost/Schedule Report (1/12/00), e.) MOD-14 (1/30/98)

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ISO 9000 Applicable
CLAUSES Standard

AUDIT RECORD

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Auditor(s) Judge P. Lunt

4.12 ISO 9001

Reviewed Inspection and Test Status element with Inspectors, Safety, Team Leader Quality Engineer/Support, and Quality Information Systems Analyst in buildings 4705, 4493, and 4471. Sampled procedures MPG-8730.2 R/A, MWI-8715.6 R/O, and QS10-QA-014 R/D and the following objective evidence:

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- Shipping: USA FCE/EVA, Shipping form 57, Code 398-45-33-M157-S4-0-002-000-2213, Insp by S. Blair, 94-Q, 2/29/00
- Handling, Packaging and Storage: a.) Space Station Truss, S1 Structural Test Article, AD42-0002 (1/25/00), PHTR (1/31/00), Critical Lift (1/31/00), Truck & Trailer Inspection (1/31/00), Inspected by 34-Q on 1/31/00, b.) p/n NAS1149C0332R @ 23-1-007-I-002-F, Inspected by 34-Q on 2/17/00, c.) p/n M39014/011324V @ 23-1-101-H-001-H, Inspected by 93-Q on 10/15/99
- MSFC Quality Conformance Stamp List (3/7/00): P. Allen, 18-Q, S. Blair, 94-Q, T. Christopher, 41-Q, T. Hamm, 40-Q, D. Hill, 93-Q, R. Clements, 34-Q
- MSFC Safety Stamp List (3/7/00): A. Black, 29-S, J. Cobb, 35-S, D. Davis, 20-S, J. Hill, 26-S, V. Kulpa, 21-S, J. Mason, 36-Q & S, R. Patrick, 37-Q 7 S, B. Robinson, 30-S
- Inspection and Test Status on Quality documents: a.) ProSEDS-DEV-ED99-130, by 18-Q on 12/2/99, b.) DCPCG-DEV-00-008, by 94-Q on 2/11/00, c.) SD43-IPCG-010, by 94-Q on 6/4/99
- Receiving Inspection IAR's: a.) Tag AAY770 for p/n M27500-20RE2N06, by 94-Q on 3/4/00, b.) Tag AAY780 for p/n M275000-22TN2N06, by 94-Q on 3/4/00, c.) Tag AAY782 for p/n M27500-16RE3N06, by 94-Q on 3/4/00
- Building 4493 TDR's and TPS's: a.) TPS-SD43-STES-009-035, by 94-Q on 2/11/00, b.) TPS-SD43-IPCG-014, by 94-Q on 3/7/00, c.) TDR-SD43-IPCG-012-001, by 94-Q on 12/9/99, d.) TPS-SD43-MSG-027, by 34-Q on 2/22/00, e.) TPS-SD43-MSG-032, by 34-Q on 2/25/00
- Industrial Safety Review: a.) PLAN-TEST-MSrr1-302 (12-16-99), b.) SD43-MDL-300 (Feb. 2000)

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AUDIT RECORD

ISO 9000 Applicable
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Auditor(s) Judge P. Lunt

4.14 ISO 9001

Reviewed Corrective and Preventive Action element, as well as Customer Complaints, with Systems Analyst II, and Supervisor Problem Assessment Center. Sampled procedure MPG-1280.4 R/A, MWI-1280.2 R/A, QS10-R-012 R/D, and the following objective evidence:

- RCAR Status List (Data Base)
- Open RCAR's #62, #126, #143
- Closed RCAR's #119, #120, #137
- Verified records requirements per procedure MPG-1440.2 R/H
- There have been no Customer Complaints received since the Surveillance Audit in August 1999. They have received ten (10) positive customer responses (QUALCOM's) as noted with the following sample:
 - a.) #110, Horizon PTA
 - b.) #111, Boeing, Huntsville
 - c.) #114, Winzen Eng.
 - d.) #119, Space Research Institute, Moscow
- Sampled PRACA system procedure QS10-R-005 R/B as well as: a.) OPEN and CLOSED lists in the data base for the period of Aug. '99 thru March 2000. b.) Closed PRACA #A17321, c.) Closed PRACA #H0006. d.) Open PRACA #A17427, e.) MSFC PRACA Codes List (4/5/96)
- Reviewed the CAP's for NQA report #99/35812/S03 and was able to close all issues on that report.

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AUDIT RECORD

ISO 9000
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Auditor(s) Judge P. Lunt

4.15	ISO 9001	<p>Reviewed Handling, Storage, Packaging, Preservation, and Delivery element with Traffic Manager, Packaging Specialist, PCH Engineer, Transportation Specialist, Department Manager of Flight Hardware Support Operations, and Supply Systems Analyst in buildings 4471, 4723, and 4708. Sampled procedures MWI-6000.1 R/A, MWI-6410.1 R/A, MWI-6430.1 R/A, AD40-OWI-004 R/A and the following objective evidence:</p> <ul style="list-style-type: none"> - Chicago Exhibit, Shipping form 57, GBLD # 3519785, Code # 101-58-62-M157-MG-9-005-000, Trucking estimates from Yellow, Arab, and Mercer. - Stennis, Shipping form 57, Code 953-36-00-B157-EK-0-003-000-2213 - USA FCE/EVA, Shipping form 57, Code 398-45-33-M157-S4-0-002-000-2213, Insp by S. Blair, 94-Q, 2/29/00 - Aerospace Development, Shipping form 57, Code 288-10-22-2357-AD-0-00R-721-2211 - Handling and Packaging and Storage: Space Station Truss, S1 Structural Test Article, AD42-0002 (1/25/00), PHTR (1/31/00), Critical Lift (1/31/00), Truck & Trailer Inspection (1/31/00), Inspected by 34-Q on 1/31/00 - ESD Handling procedure IS-EMWI-001 R/B, and Training Records for J. Salisbury, J. Certain, and A. Osmer. - Shelf Life Sensitive product, per procedure IS-EMWI-013 R/A, There is no shelf life sensitive product in building 4723 at the time of this audit. - Form 4358 Material Requests: a.) KCOGA08R, b.) JELPros29R, c.) JSMGM02R, d.) LDMSRR6R, e.) DLVCD05R - Storage Areas: a.) p/n M516995-17 @ 23-1-050-G-002-B, b.) p/n JM38510/10404BEA @ 23-1-098-N-006-C, c.) p/n NJ-J22 @ 23-1-012-D-001-D, d.) p/n M85044/1911N02 @ 23-1-043-D-003-A, e.) p/n 5A3437 @ 23-1-017-M-005-C, f.) p/n NAS1149C0332R @ 23-1-007-I-002-F, Inspected by 34-Q on 2/17/00, g.) p/n M39014/011324V @ 23-1-101-H-001-H, Inspected by 93-Q on 10/15/99. 	0	0
4.16	ISO 9001	Element not fully audited.	1	0

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ISO 9000 CLAUSES	Applicable Standard	AUDIT RECORD	Non Compliances Or Observations
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Auditor(s) Judge P. Lunt

4.17	ISO 9001	<p>Reviewed Internal Quality Audits element with Audit Manager. Sampled procedure MPG-1280.6 R/B and the following objective evidence:</p> <ul style="list-style-type: none"> - 1999 Internal Audit schedule (3/18/99) - 2000 Internal Audit schedule (2/2/00) - Internal Audit NCR's #295, #296, #300, #308, #313, #317, #342 - Internal Auditor Training Records: G. Parrish, T. Griffin, C. Wang, R. Cawthon, R. Engberg, M. Strickland, C. Shepard, J. Trolinger - Internal Audits: <ul style="list-style-type: none"> A.) Safety & Mission Assurance Office, QS01 (9/20-24/99) B.) Eng. Directorate, ED01 (10/4-8/99) C.) Space Shuttle Projects Office (2/7-11/00) D.) Science Directorate (2/7-11/00) - Reviewed 3 year record retention requirements per MPG-1280.6, R/B, para 4.0, and MPG-1440.2 R/H. 	1	0
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AUDIT REPORT NUMBER 00/35812/S04



Ref No.	Clause No.	Applicable Standard	NONCONFORMANCE AND OBSERVATIONS RAISED	NC	
1	4.1	ISO 9001	The three (3) year retention time for Management Review Meeting minutes not clearly defined.	0	
2	4.12	ISO 9001	The stamp audit records and frequency requirements are not clearly defined in any procedure.	0	
3	4.16	ISO 9001	The ASRI Contract records are not consistently filed in a way so as to be readily retrievable.	NC	
4	4.17	ISO 9001	The final Internal Audit reports do not always indicate that they audited all applicable elements as required on the Audit Plans. (ie MP01, QS01, and SD-01)	NC	

Signed for NQA

3/8/00

Signed for Company

For Sid Sancier 3/8/00

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